THE HEALTH EDUCATION JOURNAL

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THE HEALTH EDUCATION JOURNAL

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Editorial

Dr. G. B. Taylor comments in his article on the demand for health education (page 181) that opportunities for reaching the general public are now very rare. In Ilford, however, the health department hit on the imaginative idea of using a large department store at a time when it was particularly crowded.

This is really the primary administrative problem. We can reach the mothers, and sometimes the fathers, of young children easily enough, because the clinical and preventive services provide a venue. With regard to the general public—and their need is no less—an organised approach seems to be possible nowadays through the mass media alone. Dr. Taylor makes some interesting comments on television programmes, where viewer research threw some light on the proportion of the public which is interested. Recently Dr. Chalke[1] conducted a survey in Camberwell in which the greater part of the sample which completed his questionnaire put television at the top of order of preference.

The contemporary social scene is one where the congregation of groups of people in a meeting place is rapidly declining. It is true that dance halls and coffee bars are well patronised by youth, but cinemas are closing daily and entertainment is becoming home centred. Television has produced a new technique of communication which is intimate, uses visual aids, has developed to a remarkable degree of refinement the technique of interviewing, and knows how to get the best out of experts. In many television programmes it is possible to detect a hint of techniques which have been in use in health education for some time.

The contemporary interest in television is remarkable. The NUT organised a conference, held in October, on the subject of popular culture and personal responsibility, in which the impact of television on the young mind was discussed both by those whose primary responsibility is for the welfare of the young and by those whose profession it is to plan and produce television programmes. The NUT, like the members of the O'Conor Committee, are showing great concern for the welfare of children and young people who are exposed to hours of television viewing.

Since the searchlight has been turned on to television in this way there is also an opportunity of examining its possibilities for adult

[1] *Medical Officer*, 22 April 1960, p. 239.

education, which would include health education. Mr. Aidan Crawley, writing on the subject of the affluent society in the *Sunday Times* of 17th October, suggested that there was now an opportunity for the use of mass media for general and widespread education.

All this should encourage the professional staffs of health departments to consider the potentiality of television as well as of sound radio for the purposes of health education. As the primary problem is reaching the people, and as it is apparent that for a very long time to come at any rate people can be reached only in their homes, use of these media becomes a necessity. So important do we consider them that they will form a topic for discussion at the forthcoming seminar for M.Os.H. which will be held in London in February next.

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HEALTH EDUCATION BY CORRESPONDENCE

By JOAN WILLIAMS, S.R.N., S.C.M.,
Health Editor of *Woman*.

As Health Editor of *Woman*, I receive an average of 26,000 to 30,000 letters every year. Each one of them is carefully read by me or one of my trained assistants and answered with equal care, by post. (The few short letters printed on my page approximately once a month do not constitute our correspondence service, as some people seem to think.)

Every letter is filed. Each person who writes has her own record card. And this means that when she writes again—as so many do—her previous correspondence can be looked up and joined to her current letter. Thus whoever is dictating the reply has what amounts to a case record, which is naturally invaluable. Many women write first when they are pregnant, then periodically afterwards. So that in time one has a family record, as it were.

They are in all age groups, too, these people who write for advice and information: teenagers; young wives without a family; expectant mothers; mothers of young children; mothers with older children; and older women with or without a family. We give to each the genuine interest we feel—and all the help we can in the way that seems to be needed.

As I see it, health education by correspondence has certain essential threads in its pattern. One of these is accurate information relating to health of the body, mind and emotions. Another is clear factual explanation of whatever is causing doubt, worry or anxiety.

This does not mean that a health editor is a walking encyclopædia,

but it does mean that her training, knowledge and experience must be reinforced whenever necessary by fresh streams of information. She must not only take the time and trouble to keep up to date in things that are important—particularly in relation to pregnancy, labour and the early months following childbirth—but she must also have access to an authority on whichever subject she feels the need for further information.

Perhaps I am exceptionally fortunate in having a wonderful editor, who gives me her complete trust and leaves me to exercise my own discretion. For, in consequence, I am at liberty to try and arrange a consultation (for the usual fee) with any specialist I wish to see. It is not necessary to do this very often, but from time to time I, or my very efficient chief assistant, (also S.R.N. S.C.M.) will consult a well known gynæcologist, endocrinologist, radiologist, psychologist, or other specialist, and the end result is a mine of information from which we extract whatever is useful in our work.

We are equally fortunate in having an excellent relationship with the Ministry of Health, with senior members on the staff of several large maternity hospitals here in London, and also with a number of individual doctors, midwives, health visitors, and physiotherapists.

Such contacts as these are invaluable. Without them I do not see how a health editor could conscientiously conduct her correspondence service. For they are among her most reliable sources of accurate up-to-date information, and the life blood, as it were, of *her* part in giving the public proper health education.

So much for the background picture—necessary, I feel, if there is to be any real understanding of the part played by those of us who try to help through the medium of correspondence (as well as the printed word).

Types of letters

The letters we receive can be divided into three broad streams : those from expectant mothers ; those from young mothers with children ; and general enquiries, which covers everything else.

By far the biggest number of letters come from expectant mothers. Many ask specific questions, but more often, they want to be told " everything I ought to know in order to have a perfect baby, a healthy pregnancy and a good confinement." Because it would be impossible to cover even the essentials relating to pregnancy in every single letter, I have written comprehensive (free) leaflets, and one, or all, of these are sent to the expectant mother.

A covering letter tells her that the leaflets will give her the kind of information she needs, but that they are for general guidance only, and that she must be advised at all times by her own doctor or midwife.

One of these leaflets, gives accurate up-to-date information on such points as diet and weight control (under proper medical supervision) ; pregnancy disturbances, such as sickness, constipation, cramp, heartburn, varicose veins etc. ; exercise, rest, marital relationship, preparing for breast feeding ; and how to obtain the cheap milk, vitamin pills and orange juice. It also lists the symptoms of pregnancy and advises the mother about consulting her doctor and making early arrangements for antenatal care.

Another leaflet lists everything the mother will need for herself and her baby. The third deals with training for childbirth. In this, the mother is advised to attend classes if these are available in her district, and her midwife approves. And it describes the essentials of proper training : 1) mental and emotional preparation through simple factual knowledge relating to pregnancy and labour ; 2) controlled breathing ; 3) relaxation.

Until recently, a leaflet of simple postural exercises was attached. But this we have discontinued, as it is now recognised that postural exercises play a very small part in the preparation for childbirth and, in any case, are best done under proper supervision.

But no leaflet can cover every question, nor can it solve the individual problem. So there is still much to be dealt with in letters. Many ask, for example, for explanations of the routine tests and examinations and for the meaning of technical terms that puzzle them, and which they have overheard. Unexplained, these things worry the expectant mother, and worry causes her loss of sleep, vitality and contentment.

Pregnancy and labour

In relation to pregnancy and labour, health education, through correspondence, is almost unlimited in its scope. It is education which is essential to a mother's peace of mind and physical well being, and which she should get from her own doctor or midwife, or at the clinic—as indeed she often does. But, as yet, there are many hundreds who do not : who receive little or no help and guidance, apart from antenatal care in its strictly physical aspect.

Often, it is because of shortage of staff and limited clinic accommodation. But sometimes the cause seems to be lack of

caring, or lack of sensitivity and imaginative understanding. Is there sometimes complete failure on the part of nursing and/or medical personnel to appreciate the fact that they are not just dealing with a pregnant uterus, a pair of kidneys, the physical behaviour of the heart and circulation, but also with the whole personality : with the mental and emotional make-up of a woman at her most sensitive and vulnerable ? For these, and other reasons perhaps, there are many women who are greatly upset by their experience at the clinic, or, worse still, during labour.

This is an infinite pity for, as innumerable letters have shown, a bad relationship between patient and midwife can have unfortunate repercussions. For one thing, that patient is usually very reluctant to give birth to another child. Her memory of labour is too bitterly unpleasant—not so much because of any physical pain she may have experienced, but because of emotional trauma.

This reluctance to risk a repetition of her experience is often in direct conflict with a strong desire for another child. And, as we all know, persistent inward conflict has a detrimental effect on health as well as happiness. Things are made ten times worse when, as so often happens, her relationship with her husband is spoilt because fear of pregnancy makes unhappy the physical side of their marriage. Indeed, many of these women refuse absolutely to sleep with their partner and stick rigidly to their decision. The resulting two-way frustration soon has an adverse effect on the whole relationship. And in many cases, the mother-father-child relationship is affected, too. For consciously or unconsciously, the husband blames the baby for spoiling things, while his wife, sensing his reaction, may become increasingly resentful towards him and passionately protective towards, and possessive of, the child. Or else she secretly agrees with her husband with a part of herself, and with the rest feels miserable, guilty and remorseful. Either way, there is a false and discordant note in her feelings for her baby. And it can have a bad effect on her relationship with him, as well as with her husband.

An experienced health editor can help these couples enormously. It takes time and patience, and naturally she must have the mother's trust. But there is no difficulty in that direction as a rule. And over and over again the evidence shows that gradually harmony can be restored.

One begins by helping the mother to understand her problem. Once she has the necessary insight into its nature, she is usually able to bridge the gap between herself and her husband, through

renewed tenderness and through helping him to understand how their pattern shaped. This, and the putting into effect of sound advice on family planning, is usually sufficient to put the marriage back on a normal basis.

The husband must also be helped back into the picture where the child is concerned. So that by degrees it becomes *their* child. Once this natural and right sharing is firmly established, all is well. Except for one thing . . . . . the question of the future is not yet solved. Are they to have more children—or not ?

Here, too, the health editor can help. For patiently and gently she can bring the mother to a point when she can see for herself that the nursing (and medical) profession have their own trials and tribulations : and that sometimes crossness and apparent indifference stem only from tiredness and overwork. From here, it is not difficult to encourage her to try again (if she really wants another baby, as she usually does). As she generally has the next baby at home, things go right more often than not. While hospital confinements may well be a good deal safer, home confinements are a great deal happier, as a rule. It is seldom that one hears of the relationship between patient and district midwife being other than good.

Postnatal difficulties

What about the situation where the mother has a normal labour and puerperium ? Where does health education by correspondence come into the picture now ? In a dozen different ways. Take, for example, the young mother with her first baby : she can feel very lonely and inadequate, for almost certainly she had a job until well on in her pregnancy, so she is not yet used to being at home all day on her own. She had imagined that having a baby would change everything : that she would be completely content looking after him, and would want nothing else. Sometimes, this is indeed the case, and then she may only ask for advice on things like the restoration of her figure, her diet, family planning, the postnatal check up and the management of her baby.

In regard to this last, I would like to stress that I always urge mothers to attend the welfare clinics and consult their health visitors, and that I do not think infant feeding is the right subject for education through correspondence—except in a general way, where one is merely giving straightforward guidance about feeding the normal healthy baby under perfectly normal circumstances.

But many young mothers get very depressed and irritable—and

gentle questioning makes clear that this is very largely due to loneliness and boredom, aggravated by a sense of guilt that they should feel this way when they had expected to feel nothing but non-stop maternal tenderness and joy! They are enormously relieved when the situation is explained to them, and when one stresses how natural is their reaction and how unnecessary their guilt.

One also explains, of course, that many women feel a bit flat and depressed during the first few weeks after the puerperium, partly because there is a sense of anticlimax after the tremendous experience of childbirth, and partly because of hormone changes and influence.

This kind of commonsense factual explanation is invaluable, for it helps to restore morale and self confidence, which soon leads to increased vitality, contentment and well-being. Incidentally, the situation can often be improved still further by advice which induces the young mother to live healthily and avoid the extreme fatigue from which many of them suffer through trying to do too much too soon.

Family relationships

Without such all-round guidance, that same young mother can run into serious difficulties, not only health difficulties but in regard to her relationship with her husband. For if neither of them understands why she is so depressed and touchy, each secretly wonders what has gone wrong with the marriage : why having a baby is nothing like the joy they thought it would be.

Another situation which often crops up, and with which we can help, is the familiar one in which there is a new baby on the scene and the older child is jealous. Or, equally familiar, the situation in which the young husband feels superseded by the baby and quite superfluous. So he tends to take his secret jealousy and hurt feelings to his club or the local, leaving a tearful and resentful wife to spend the evenings on her own.

Unaided, this couple can soon be in deep waters. Equally, with the right kind of help, all will soon be well again, For all that is needed, as a rule, is to show the wife how the husband feels, and, (via a specially written leaflet—*Calling all husbands*) help the man to understand his wife. Once that is achieved, they are able to make the necessary adjustments.

How else is health education given through correspondence? In so many ways that it is impossible even to list them in this restricted space. But these are some of them :

Mothers are helped to breast feed successfully and feed their families wisely. They are helped to tackle their children's health and behaviour problems sensibly. They are urged to seek advice in the right quarter when it is needed—from the clinics, for example ; from the health visitor or the family doctor. They are encouraged to take advantage of available facilities—immunisation, for instance (a clear and simple explanation of what is entailed, and why, will often help.)

Straightforward and carefully written leaflets are sent out to help them with all sorts of things : bedwetting ; habit training ; weaning and mixed feeding ; the management of the child who is difficult at mealtimes, etc., etc.

A recent offer to mothers on my page in *Woman* of leaflets on how to explain the onset of menstruation to their young daughters, and the management of the periods, brought in over 3,000 applications, plus many letters asking for individual help. This suggests, I think, that mothers do now realise the importance of telling their children about this natural function in the proper way. It seems they have been educated to a point (partly through correspondence) where they know that fumbling over it, and creating an uncomfortable atmosphere in the telling, leads not only to unnecessary worry on the child's part, but, in many cases, to an unhealthy attitude of mind towards a natural function. This, as we all know, can lead to menstrual difficulties, and, at a later date, to a faulty attitude towards marriage and childbearing.

Much can be achieved in other ways through correspondence. Husbands and wives can be helped to overcome apparent sterility by seeking the proper advice. They will often do this quite willingly once they have had a clear explanation of the usual pattern of investigation. Particularly is this so with regard to the husband's share, for he is often reluctant in the first place, simply because he confuses sterility and virility. But once he understands the difference, he is usually quite willing to co-operate.

Then, too, much can be done to prevent chronic ill health by means of persuading women to seek the proper advice about conditions they tend just to put up with—vaginal discharge, for example, dysmenorrhœa and menorrhagia.

With young women, particularly, one can achieve much in the way of health education. Their questions relating to body odour, leucorrhœa and menstrual pain offer plenty of scope for guidance in such essentials as strict personal hygiene, exercise and wise eating habits.

Emotional stress

No analysis of our correspondence service would be complete without mention of that large group of women whose ill health and depression roots from destructive emotions, such as persistent anxiety, worry, fear, jealousy and resentment. Many of these women are in their twenties and thirties. (Only a small proportion are older women going through the menopause.) Outstanding in this particular pattern of ill health are such conditions as chronic tiredness and indigestion, persistent backache, recurring headaches and difficulty in breathing or swallowing. At the back of this there is invariably depression, anxiety and irritability.

Almost without exception, the doctor's diagnosis has been "nerves"—and the treatment the usual mixture of sedatives, tranquilisers and tonics. This helps up to a point, but what these women also need, and need badly, is a better understanding of themselves and their reactions. This can often be achieved through the medium of correspondence, provided, of course, that one has the necessary experience and understanding.

Certainly, it has been my experience that with increased insight into the nature of their problems, these women experience considerable easing of the tension. Then it is often possible to encourage them towards greatly improved health, especially if they will co-operate — as many will — over such essentials as wise eating habits, the regular practice of muscular relaxation and deep breathing, plus the instigation of a more satisfactory way of life.

It is an interesting and illuminating fact that I once had over 6,000 letters in response to an article I wrote on nervous tension and some of its causes and effects.

A number of these women—young wives and mothers at that—corresponded with me for months. Helping them sort themselves out was at once the most demanding and rewarding task I have ever undertaken. And it revealed with devastating clarity something I have long known to be the truth : that few things can more successfully undermine health, vitality and usefulness than (long-term) ugly emotions. And that healing of mind and body comes only when these emotions (together with the cause) have been faced, overcome, and replaced by the normal healthy emotions of love, trust and self respect.

As I see it, a clear understanding and the constant application of this truth is at the very centre of health education at its best, whether by correspondence, or through any other medium.

THE DEMAND FOR HEALTH EDUCATION
Part 2*

By G. B. TAYLOR, M.B., B.S., D.C.H., D.R.C.O.G.,
Assistant Medical Officer of Health, Borough of Ilford.

Food handlers

In 1956 new Food Regulations appeared. In order to let people know, a publicity campaign was instituted and 720 owner/occupiers and managers were invited to a meeting at the Town Hall which was attended by the Mayor, the Medical Officer of Health, the Chief Public Health Inspector and several other important personalities. Only 150—200 turned up. This is roughly 20% and we should not expect a better figure than this.

Health education to food handlers meets several practical problems. In Ilford, whenever a lecture is held on Monday, no butchers will attend, because it is their half-day; likewise, if a lecture is held on Thursday afternoon no grocers will attend, because it is their half-day. Many of the food handlers and assistants who work in food shops are women, and they will gladly attend a lecture given in working hours, no doubt because it is a break from their ordinary routine, and at the same time they are getting paid for it. However, the fly in the ointment in this case is the manager, who does not take kindly to losing business. Someone might come into the shop and not get served. Why not hold the lectures in the evening? It must be remembered that many women are tired after a day's work in a shop. They go home to a husband and possibly a family and they have their household duties. It would hardly be fair to ask them to a lecture in the evening, and madness to expect them to turn up.

*Part 1 was published in *Health Education Journal*, September, 1960.

The following system in Ilford overcomes most objections. Lectures are given in particular areas and the shops within a radius of say 200 yards are circularised. A point is made of seeing individual managers to explain the lectures. A room is usually chosen in one of the bigger stores. All personnel cannot attend at the same time because this would mean closing down the shops, with consequent loss of business. Lectures are therefore usually given in duplicate or triplicate so that all the staff may attend on a rota system. The response is good, but not as good as the response to lectures given in big institutes, such as hospitals, factory canteens or school canteens. The principal reason for this difference in enthusiasm lies in the fact that the schools and hospitals receive lectures on the premises, the people are immediately available and there is no financial loss entailed.

The demands for health education cannot be assessed by the number of questions asked after a lecture. Many lecturers and health educators are disappointed because they feel they are not carrying their audience with them. They must remember, however, that people are very diffident about getting up in a hall to ask a question. It does need a certain amount of moral courage. An example of this was a lecture given to an audience by one of our public health inspectors, who thought that he had made no impression at all and that the demand was negligible. A few days later he visited a big store and no less than three assistants approached him to ask questions about the lecture.

When health education is directed towards business the demand is interwoven with finance. When doctors go to factories to immunise against poliomyelitis, there may be as many as 400 workers to be immunised. If the organisation is poor and these workers are kept from their benches for a long time, both they and the management are resentful because both parties lose money. The demand for immunisation is then not likely to increase. If the organisation is good and the workers lose no unnecessary time from their benches, then the management make every effort to help the medical authorities.

To give two more concrete examples : new proprietors of cafés may sometimes ask for help because they have heard that costs can be reduced thereby. One particular proprietor was having to repaint his kitchen every six months. The reason for this was that the walls steamed very badly because there was no canopy over his stove. A food inspector informed him that although a

canopy over the stove was not a legal requirement, if it were provided, it would save money. One was provided, redecorating was not then necessary for about two years, and better working conditions obtained in the kitchen. Another proprietor had his kitchen painted, but it was soon noticed that fat was being splashed against the walls, and within a very short period the walls were dirty. This particular person was advised to use hardboard with a plastic surface which could be cleaned easily, again to save money.

I think it can be said that in the factories the demand for health education is good provided there is some financial gain, but otherwise the response is poor. However, if practical problems which arise can be solved, then the health educator can expect encouragement rather than discouragement.

I cannot speak on the wider issues of health education in factories, such as management/labour relationships, but the personnel officer who is responsible for this is a very busy man.

The general public

I have touched on health education and the demand for it from particular sections of the community. The demand for health education from the general public is now left for discussion. The attitude of the general public is rather like that of the Highland laddie who refused the lady's golden guineas and chose the pennies instead. He knew what the pennies were worth, but he had never seen golden guineas before ; he chose what he knew and was accustomed to. The general public is like this in that certain customs, attitudes and ideas are prevalent. They have been conditioned over years and find anything new difficult to accept. A good example of this attitude to-day is smoking and cancer. Many people will not accept that there is even an association between the two. An approach to the general public is certainly the least fruitful field for results or for demand, as the following campaigns illustrate :—

In 1955, permission was granted by a local store to use part of their showrooms for health education. The idea was that people would see the health education programme while shopping, and that shopping would be a primary reason for attendance rather than the health education programme. It was felt that this siting would have much more chance of success than the Town Hall or a Church Hall. The actual sessions such as immunisation clinics, dental clinics, and routine medical inspections, were held in the store, and people attended for vaccination and immunisation

in full view of the public. I do not think that a more ideal situation could have been arranged. The display lasted for a week. The following were the main features :—

Monday p.m.	**Smallpox**		Attendance 84
	Questions :	Reinoculation of boy B.C.G. Diet and clothing	
Tuesday a.m.	**School medical inspection**		Attendance 84
	Questions :	B.C.G. Number of tuberculous cases Age at which children are medically inspected.	
Tuesday p.m.	**Infant welfare centre**		Attendance 243
	Questions :	Ages for immunisation General questions about feeding problems	
Wednesday a.m.	**Dental**		Attendance 76
	Questions :	Training of health visitors Toys and dirty living rooms Care of elderly	
Wednesday p.m.	**Dental**		Attendance 293
	Questions :	Is x-ray of feet harmful ? Vaccination	
Thursday a.m.			Attendance 79
	Questions :	Nil	
Friday a.m.	**Diphtheria immunisation**		Attendance 236
	Questions :	Nil	
Friday p.m.	**Diphtheria immunisation**		Attendance 396
	Questions :	Shoes, clothing, home hygiene Smoke from nearby laundry Diphtheria and whooping cough General disbelief of bad living conditions to-day as shown in bad room	
Saturday a.m.	**Welfare foods**		Attendance 382
	Questions :	Health visiting Safe toys for young infants Follow-up on discharge from hospital Welfare of old people Damp walls Domestic help service Mass radiography	
Saturday p.m.	**B.C.G.**		Attendance 636
	Questions :	Booster injections Health visitor training Numbers of TB cases Dampness, dry rot, woodbeetle, rats, coalite and coke	

Total attendance : 2,587
Total population : 184,000

Special Sessions

Monday 3-15 p.m.	Swimming and diving film Talk by professional coach	Attendance 105
Tuesday 3 p.m.	Health and Beauty Demonstration H.Q. member of Women's League of Health and Beauty	Attendance 80
Wednesday 3 p.m.	Painless childbirth film Talk by Dr. Grantly Dick Read	Attendance 106
Friday, 3 p.m.	Safety in your Home Quiz Mrs. W. E. Duncan, Manager of Home Safety Department, RoSPA Dr. Camps and others in the Quiz	Attendance 70

Total attendance 361.

What can be learnt from these records is that if you have only a limited period for a health education programme it is better to have it at the week-end, because attendance is much more satisfactory. The total attendance was 2,587 out of a total population of 184,000. If these figures are taken at their face value, then the results are very poor. However, figures should not be taken at their face value. There must be a comparison with figures from other fields. For instance, how many attend the local football match, horticultural show or political meeting?

To quote from the *Daily Telegraph* of 29th March, 1960 :—

> " I am sorry to hear that the public response to the London Symphony Orchestra's concert arranged for to-night in aid of World Refugee Year has been so poor that the concert has been postponed. The orchestra and soloists were giving their services free."

When comparisons like this are made, the health educator should not be too despondent, because he is labouring under the same disappointment as are workers in other fields.

Mass campaign v. individual approach

Another health education campaign ran for three days and the numbers attending were 659 out of a population of 184,000. To quote from a letter about this particular campaign—" I think the general staging of the exhibition was good, but our Committee deeply regret that the support from the public was so poor."

The number of people immunised against poliomyelitis in the particular area of which I have personal experience is 75% of the 0-15 age group and 35% of the 15-25 age group. It was because these figures were not very satisfactory, especially for the 15-25

age group, that it was decided to have a campaign to increase interest in polio immunisation. The campaign was directed to the public in general and not to any specific body. It was decided to have a short intensive campaign of one week only, but with heavy publicity, in the belief this would be more effective than a drawn-out effort.

All the shop-keepers in the main thoroughfare put out posters on a particular Saturday. At the same time local cinemas displayed posters in the foyer, together with request forms, and in addition they showed a ten-second polio flash during the interval. A special recording by Eamon Andrews made an appeal to people to be immunised against poliomyelitis, and these recordings were played at the local football match, dance halls, clubs and through a loud speaker van which patrolled the streets. Propaganda material was printed in the local press, and factories were issued with small leaflets to be put into pay packets. This campaign lasted for a week. All the local chemists acted as registration centres.

The only evident result from this campaign was a request for two forms from a person who had seen the advertisement in the local press. There are three conclusions which can be drawn from this :—

1. That the campaign was not run efficiently.
2. That the figures we have are incorrect.
3. That the public are apathetic.

As far as the first point is concerned, I will leave you to judge. The second point is not without significance, because many residents in Ilford do travel to London, and the London County Council clinics have been giving immunisations against poliomyelitis. I wrote to the Medical Officer of Health for the London County Council, who said that some 45,000 people who were not resident in the County of London had been vaccinated by the London County Council. It is very difficult to estimate how many people from our particular borough would be included in that 45,000, but a rough estimation might be 3,000—4,000. Even if we said that 3,500 were vaccinated this would bring the total to roughly 40%, and would still mean that 60% had not been vaccinated. So in spite of an intensive campaign, the 60% remain untouched. This leads us to the third point, and I do not think that one can escape the conclusion that the real reason for failure to be immunised is apathy.

An interesting sidelight did arise from this campaign in the way

of comparison. The campaign took time, effort and energy with little return, and yet, approaching the problem from another aspect we did much better. We decided that in view of the failure of a campaign directed to the public in general a campaign directed to a particular section would be worth trying. We looked around for a section of the community which would include the 15—25 age group, and decided that the youth clubs would be best.

A letter was sent to 50 youth leaders informing them that a lecture and film would be given in the near future and asking whether they would be interested. Of these 50, 25 did not reply. Of the 25 who said they would be interested, 13 failed to turn up, and three more replied saying that the date was inconvenient, so that eventually nine attended. The hard result was that only nine out of the 50 originally invited attended (roughly 20%).

It can be argued that this figure is good or bad, for 20% may be interpreted as being good or bad. The interesting thing is that from this 20% who were really keen we were able to get more done than we did through the entire week's campaign directed to the general public.

From all this it is apparent that it is almost impossible to judge the demand for health education, because the demand differs according to the approach made. A 20% response to a lecture is a good response, whereas two requests from a week's campaign is a very poor response.

There is a danger from falls in the home. Roughly the fatality rate is half as high again as deaths on the road. We embarked upon a campaign to publicise this. It had two approaches, one to the general public and the other to a specific cross section of the public—the aged—who suffer most from falls in the home. The approach to the public was made through the usual channels of posters, articles in the press, leaflets and an appeal to the clergy to put an article into church magazines, because the church population in this country is mostly elderly. It is obviously impossible to judge what the response to this approach is, but I will refer to it later.

The personal approach was a marked success. The leaders of the Old Age Pensioners' Association were asked to attend a lecture. Out of about 20 asked the majority turned up. They were told the problem through an illustrated lecture. They were then shown posters and leaflets, and a quiz, which was formulated by the campaign organisers, and asked whether they preferred to go back and talk to their members personally or whether they would

like a lecturer. They decided on a lecturer. The lecturer was able to visit about 15 local clubs and lecture to an audience averaging about 90. The lecture was received with obvious enthusiasm, the main reason being that these people were concerned with the death rate from falls because it affected their particular age group.

A lecture is much less trouble than an intensive campaign, and it is very interesting to note that 1,500 people saw a film strip and heard a lecture on falls, whereas with a week's campaign in a local store, to which I referred previously, only 2,500 people visited this store. Comparing these figures again, it seems there is much more demand for health education from a personal approach than there is from an approach in general.

It is difficult to judge the effect of a campaign directed to the public in general, but immediately after the above lecture, I showed the audience a specimen of the poster entitled " Mind that Fall " which had been displayed in the borough and asked them to be quite truthful in replying to the question whether they had seen it. The highest number I ever got was four—3%. If one has to judge the demand for health education from the number of people who notice posters, then one must come to the sad conclusion it is very small. On the other hand there was a completely different response to the lecture given. This discrepancy again illustrates how difficult it is to judge demands for health education.

Support for this observation on posters comes from Harpenden. They had a campaign to prevent holiday accidents, using posters warning against broken glass. It was decided that each member of the Committee should at the end of the campaign ask five people certain questions regarding the posters used. During the Bank Holiday weekend 20 large posters and 100 roundels were displayed in the town and on the very large common. Ten members of the Committee then asked their five pre-selected persons the following questions :—

1. Have you noticed any posters during the past few months concerning the dangers which litter can cause ?
2. What would you say is the main danger ?
3. Did the posters have any direct impact on you personally ?

Of the 50 people questioned only 12 recalled seeing the posters, and four of these felt that they had had sufficient impact on them personally to make them think. A further 7 thought that broken glass was the main danger.

Magazines

I should now like to consider two other important sources of health education, viz., magazines and television. I contacted the health editor of a popular women's journal asking what the demands were for health education and I think it would be appropriate for me to quote extracts from the letter I received in reply :—

" One must differentiate, as I have already said between ' need ' and ' demand '. As a doctor in public health work you know so much better than I do how great is the *need* for health education, in schools and among the adult population.

" But the ' demand ' is a totally different matter. That there is interest in the subject is obvious I think from the popularity of ' doctor's columns ' in newspapers and magazines, of fiction, films and television with a medical basis or slant, and of columns such as my own. But interest doesn't necessarily imply effort. Whereas demand does. And it is a fact that a great many people will not make the effort to obtain such information as is theirs for the asking, let alone ' demand ' it. For example, a mother may read with interest a column in a magazine, but may not attempt to find the time to take her baby along to the welfare centre.

" Nevertheless there is an ever-growing number of people who are ' demanding ' in the sense that they want to know, and they take the trouble to ask. There is nowadays a tendency to want an expert opinion, and this is gradually replacing the old habit of asking Mrs. So-and-so next door, because she's had twelve children and she ought to know.

" . . . . . 30,000 letters come my way every year—letters which prove without a doubt that people want to know a great deal more about health matters. Not only about how to deal with illness and health disturbances, but how to keep fit too.

" Questions are many and varied. The largest group is undoubtedly pregnancy queries of one sort or another, followed closely by questions on bringing up children."

Thirty thousand letters a year means that this particular magazine gets just under 100 requests a day about health education. However, as the writer says, most of the questions are personal queries from a particular section of the community which is worried by force of circumstances. Since they have to ask a newspaper it may possibly mean that the health educators are failing in their duty towards these people, and they therefore turn to other sources.

I also wrote to Lady Barnett, who is a doctor and writes magazine articles. An extract from her reply says :—

" In my magazine articles I find that there is an enormous ignorance about the simplest subjects and a great desire to know more. I think the main interest is in progress in medicine, the allaying of fears and taboos about consulting doctors, and explanations and reassurances about operations ".

Television

The B.B.C. and I.T.V. made the following comments when asked whether they had much demand for health education. The B.B.C.

stated that they received a fair number of suggestions and requests for broadcasts on various health matters but complete figures were not available. In any case they did not base their plans on what was, after all, merely the opinion of an infinesimally small percentage of their audience. I.T.V. replied that the number of requests received for programmes on health had been so few that they were insignificant.

Nevertheless the B.B.C. did arrange a series of ten half-hour television outside broadcasts entitled " Your Life in Their Hands ". The programmes came from ten provincial hospitals throughout Great Britain and dealt in turn with various aspects of medicine and hospital treatment, emphasis being laid on modern developments. The primary aim of the series was to inform viewers of the good distribution of medical facilities throughout Britain, and it was hoped that one result would be wider recognition of the fact that up-to-date medical attention is available all over the United Kingdom.

Programme	Venue	Content
1. Breath of Life (11.2.58)	Churchill Hospital, Oxford	Poliomyelitis, use of iron long to relieve breathing troubles, etc.
2. Ray of Hope (18.2.58)	Christie Hospital and Holt Radium Institute, Manchester	Cancer : location, treatment (radium, x-rays, etc.)
3. A New Lease of Life (25.2.58)	Queen Elizabeth Hospital, Birmingham	Rheumatic fever damage to heart. Operation of mitral valvotomy
4. Out on a limb (4.3.58)	Stratton, Bude, Cornwall	A country G. P. on his rounds. Relationship with small cottage hospital
5. Thought is the Seed of Action. (11.3.58)	Edinburgh Royal Infirmary	Film of operation for removal of blood clot —brain function, etc.
6. The Ever-lessening Shadow (18.3.58)	Sully Hospital, Glamorgan	TB : prevalence, treatment, etc.
7. Diverting the Stream (25.3.58)	Bristol Royal Infirmary	Operation to by-pass a malfunctioning liver.
8. The Fires of Life (1.4.58)	Western Infirmary, Glasgow	Thyroid deficiency and overactivity : symptoms, treatment, etc.
9. Machinery for Living (8.4.58)	Western Infirmary, Glasgow	Artificial kidney machine, heart/lung machine : demonstrations and use
10. Looking to the Future (15.4.58)	Llandough Hospital, Glamorgan	Preventive medicine as applied to pneumoconiosis. Incidence of bronchitis etc.

Audience sizes and reactions

1. The estimated size of each audience is given in the table below. (These estimates are derived from the daily Survey of Listening and Viewing, in the course of which representative samples of the adult population of the United Kingdom, numbering some 3,300 persons each day, are questioned about their previous day's listening and viewing.)

Programme	Estimated Audience: % of adult population	% of Band I public*	% of Band III public†	% of Band III public viewing ITV at this time
Breath of Life (11.2.58)	21	52	24	39
Ray of Hope (18.2.58)	21	51	23	28
A New Lease of Life (25.2.58)	27	54	36	17
Out on a Limb (4.3.58)	21	49	26	24
Thought is the Seed of Action (11.3.58)	23	50	27	22
The Ever-Lessening Shadow (18.3.58)	20	48	23	32
Diverting the Stream (25.3.58)	24	48	32	20
The Fires of Life (1.4.58)	25	54	30	22
Machinery for Living (8.4.58)	18	45	19	36
Looking to the Future (15.4.58)	18	41	21	31
Averages	22	49	26	27

*Adults with television sets capable of receiving only B.B.C.-T.V.
†Adults with television sets capable of receiving both B.B.C. and I.T.V.

(*a*) The audiences of these ten broadcasts ranged from just under one in five to over one in four of the entire adult population of the United Kingdom, the average being 22%, or approximately eight and a quarter million adults.

(*b*) These audiences included about half (49%) of that part of the population with TV sets capable of receiving BBC programmes only (the Band I public).

(*c*) They also included about a quarter (26%) of that part of the population with TV sets capable of receiving both BBC and ITV programmes (the Band III public), a further quarter of these (27%) electing to view the ITV programmes which were on at the same time.

2. These are impressive results ; they show that the series attracted audiences amongst the Band I public which are comparable with those of many popular entertainment series and that in terms of audience size they fared better under competitive conditions than the general run of BBC-TV output.

3. **Reactions of audiences.** Those members of the BBC's Viewing Panel who happened to see these broadcasts were invited to make known their reactions to them on prepared questionnaires. (The Viewing Panel is a representative sample of the television public.) In addition to expressing themselves in writing, each of the viewers summarised his reactions on a five-point scale ranging from A+, which indicates a highly favourable reaction, down to C–, which indicates a highly unfavourable one. The distribution of responses to each broadcast is shown below, together with the Reaction Index which represents the mean of the responses.

Panel Members' Reactions

Programme	Percentage awarding					Reaction Index (Max. 100)
	A+	A	B	C	C–	
1. Breath of Life (11.2.58)	53	39	8	—	—	86
2. Ray of Hope (18.2.58)	46	39	12	1	2	82
3. A New Lease of Life (25.2.58)	66	25	6	1	2	88
4. Out on a Limb (4.3.58)	28	35	25	9	3	69
5. Thought is the Seed of Action (11.3.58)	45	41	12	1	1	82
6. The Ever-Lessening Shadow (18.3.58)	47	42	10	1	—	84
7. Diverting the Stream (25.3.58)	60	35	4	1	—	89
8. The Fires of Life (1.4.58)	42	48	9	1	—	83
9. Machinery for Living (8.4.58)	47	37	15	1	—	83
10. Looking to the Future (15.4.58)	44	35	20	1	—	81

4. BBC broadcasts dealing with health and disease normally earn high Reaction Indices, but those of this series are quite outstanding. As will be seen from the ' distribution ' of reactions, in all but one instance only a tiny minority made use of either the moderately adverse (C) or strongly adverse (C–) points on the scale.

5. The broadcasts with the highest Reaction Indices were No. 7 (89), in which the operation on the liver was shown, and No. 3 (88), which showed the valvotomy operation. But No. 1 (86) on poliomyelitis was a close third, nor were the rest—with one exception—far behind (84 to 81). The lowest Reaction Index (69), though not in itself an unsatisfactory one, was for No. 4, in which the normal work of a Cornish cottage hospital was shown—a subject which was inevitably less dramatic and spectacular.

It is important to note paragraph 2, which states that the results are impressive and that they compare favourably with many popular entertainment series. However, this is just the point, and it can well be argued that this was entertainment rather than health education. It is very difficult to see how TV illustration for the repair of atrial septal defect or ventricular septal defect can have anything more than entertainment value for the average individual. As a matter of fact the panel members reactions to the programme which portrayed a country G.P. on his rounds and which had no drama, had a reaction index of only 28%, whereas most of the others were nearer 50%.

This brings up the whole question of what health education is, and to the average individual it is not watching an exposition of high powered surgery. To quote the Audience Research Report : the broadcasts with the highest reaction indices were No. 7 (an operation on the liver was shown), and No. 3 (a valvular operation was shown). The lowest reaction indices were for No. 4 in which the normal work of a Cornish Cottage Hospital was shown—the subject which was inevitably less dramatic and spectacular. It seems, therefore, that if television is to be used as a medium for health education, then a dull subject must be embellished with drama if it is to enthuse the average individual.

Conclusion

In summarising the demands for health education one cannot give a simple, single answer, because the demands depend on so many varying factors. To recapitulate the factors I have mentioned :—

1. *Approach :* if the approach is to the general public the demand for health education is likely to be poor ; if it is to a particular section then it is good.

2. *Circumstance* (by which I mean the need for physical or psychological guidance) does create a heavy demand for health education.

3. *Finance :* if money is involved, then the people who are likely to lose or gain will be very interested in health education. I described a case in point when referring to health demands as the public health inspector finds them.

4. *Fear* produces a heavy demand ; for instance, in an epidemic people will want to know what to do ; or they may be made to think very deeply and be moved to action by the death of a well-known national personality. An example of this occurred a year

or two ago, when a well-known English footballer died from poliomyelitis.

5. *New knowledge :* people will demand health education on subjects on which new knowledge has been acquired ; three topics which have come to the fore recently are hypervitaminosis—many queries are made about this in the infant welfare clinics—cancer and smoking, and radiation hazards.

6. Finally, the demand does depend in no small way upon the *health educator*. If he is a well-known personality, then he is likely to attract a reasonable audience, but if he is unknown then he can only hope to create a demand if he is in possession of three things :—

(*a*) Detailed knowledge of his subject.

(*b*) The ability to convey that knowledge to his audience.

(*c*) The support of modern tools to enable him to do his job —such as film projectors, slide projectors and tape recorders.

When a demand does exist, or has been created, then it is necessary to promote and maintain that demand, or interest will flag and finally disappear. In order to promote and maintain the demand, the three requirements listed above for a successful health educator must obtain, together with unlimited enthusiasm. If a health educator has no enthusiasm for his job, he will never create demand in his particular area. He must encourage a good personal liaison between different individuals, such as health visitors and school teachers. By this means interest and enthusiasm are sustained and the demand for health education maintained.

I wish to thank Miss D. Wheeler, Public Health Department, Ilford, for typing the script of this paper.

MASS MEDIA AND THE MOH

A Seminar for Medical Officers of Health will be held at the Cora Hotel, Upper Woburn Place, London W.C.1, from 21st to 24th February, 1961. The theme will be presented in two parts : **The Future of Public Health** and **Reaching the Public.** Visits will also be arranged to television studios and to the editorial floors of two national newspapers.

CANCER EDUCATION FOR THE PUBLIC

By S. G. JEFFS, M.B., Ch.B. (V.U. Manc.), M.R.S.H.

CANCER is probably the oldest disease known to Man. Evidence of its existence in the bones of prehistoric brontosaurus puts its antiquity at an estimated 80 million years ago, and, since it is a disorder of the living cell, it is likely that the condition has existed since life began. Hence it is ubiquitous throughout the animal and vegetable kingdoms and, to all those concerned with the growth and cultivation of living things, presents a problem of magnitude, the immensity of which in relation to human beings may be judged from the Registrar General's statistics. Thus in the year 1956, in England and Wales, cancer caused nearly 93,000 deaths, which represents 1 in 5.6 of deaths from all causes, and of these, more than 1,000 were in children under the age of 15 years.

Statistics show that with the knowledge we already possess between four and ten times as many patients with cancer could be cured if everyone with the disease were to present with the earliest symptoms. Though great therapeutic strides are being made, the most effective treatment is of no avail if patients do not submit themselves for it, and analyses of public opinion confirm that large numbers of sufferers do not seek medical advice until their malignancies are hopelessly advanced. In the Manchester area, 20% of previously untreated patients are in the most advanced clinical stage at the time of their first visit (to the Christie Hospital) and as many as 8% of previously untreated cases are deemed to be in too advanced a stage even for palliation.

To obtain insight into this Fabian policy, Aitken-Swan and Paterson (1955) interviewed 314 patients and found that the delay

in seeking medical advice was due either to fear or to ignorance. Fear, they said, (and I should like to quote them) because " it is incurable and violently painful ", because " the suffering is so great and the end so inevitable after all ", because " it always seems to prove fatal ", because of " the terrifying consequences—pain and its finality, " " because there isn't a known cure ".

And ignorance—of every four patients with cancer of the skin, three did not realise even the possible significance of their symptoms, and two-thirds of those with cancer of the cervix uteri were likewise unaware. Such dread and nescience are not characteristic of other maladies. No-one delays until the crisis of lobar pneumonia before calling in the doctor, and few will now allow a hæmoptysis to pass without seeking medical advice. But the fear of cancer is a singular one in the minds of the public, and such fear is born of ignorance.

It follows, then, that an important pre-requisite towards the early diagnosis of cancer is the education of the public. The Minister of Health (1955), realising the tremendous need for this, invited local authorities to undertake any action they considered desirable to further the cause of cancer education. But very few took any steps at all, excusing themselves on the grounds that there was a lack of enthusiasm on the part of local practitioners, and that they were awaiting the results of the experiment in education by the Manchester Committee on Cancer. The nugatory time-lag has continued despite the pleas for further education expressed in world literature, and in apparent disregard of the already known success of the Manchester enterprise. This project has shown that, after as little as five years of cancer education, there is a statistically significant improvement in the proportion of women who think that cancer is not incurable and who believe that early treatment increases the chance of cure. The result can only be described as admirable, and the scheme has been recognised as a model on which others can, with advantage, be based.

The Manchester survey was conducted along the lines of a Gallup Poll, and in any enquiry in which direct questions are asked such as " Is cancer ever curable ?" and " Which do you consider the greater menace, cancer or TB ?" the answers lie between fixed alternatives and the knowledge thus gained, though important, is self-limiting.

In order to find out more about people's private fears and apprehensions, I kept records for six months of all the questions I was asked by the lay audiences to whom I lectured. All questions were spontaneous and followed a short lecture in which cancer was

presented from the point of view of its history and of its nature. Most of my listeners were women belonging to religious social groups, political, pensioner and other gatherings.

Analysis of questions

In all, 213 questions were asked, which I have been able to group into 20 dominant ideas, leaving a small miscellaneous collection. Some questions were asked so frequently as to merit individual quotation, e.g., Is cancer hereditary ? which was put to me in 15 of the 18 lectures. Others, in which the wording was not similar but the sense related (e.g., Does cancer grow rapidly in young people ? Does an old person have a better chance of recovery than a young one ?) I have grouped under more general headings.

In Table 2 (page 201) is tabulated a summary of all the questions asked, arranged according to the sense I have outlined and in order of their numerical frequencies. I would request the reader to note them now.

Is cancer hereditary ? This question was asked more often than any other. Can cancer be caused by a knock ? Can it be caused by a shock, by a food, by irradiation ? Is it contagious ? These are very interesting questions—it is not always obvious to the doctor what is going through the patient's mind. Does smoking cause lung cancer ? This topical question, it must be remembered, was asked mostly by women. Questions on the age of people and the growth of cancer were frequently asked, and on the fate of such patients information was repeatedly requested. Some individual questions are worthy of quotation—What happens to a person with cancer of the breast left untreated ? What happens to people who refuse treatment ? How long can a person live with an untreated cancer ? How long is a cure ?

Most of the questions on x-rays related to dangers and pain, e.g., Are there any dangers associated with x-ray treatment ? Is treatment by x-rays painful ? Is there much danger from repeated x-rays, I mean for ordinary investigations in hospital as well as for the treatment of cancer ?

Of equal (numerical) interest was the subject of the prevalence and distribution of cancer. Is cancer more prevalent in some countries than in others, especially the civilised ones ? Is cancer more prevalent in a dirty town than in the clean country ? Is there anything significant in the geographical distribution of cancer ?

The reliability of doctors was questioned on six occasions. Once I was asked bluntly : Is the general practitioner reliable ? But

equally often I was asked how patients themselves could suspect early cancer.

Questions on individual organs often seemed connected with personal knowledge of a sufferer : Are bones ever affected by cancer in adults ? This questioner knew a boy with a bone sarcoma.

Upon careful scrutiny of the items comprising Table 2, I was able to regroup the questions under broader headings. Under the wider caption, The Origin and Causation of Cancer, I put questions 1, 2, 3, 5, 9, 14, 15 and 16. Similarly, questions 4, 6, 7, 8, 12, 13, 17 and 18 (and on scrupulous examination of the original questions, 17 of the 44 comprising Group 20 of Table 2) are concerned with the effect upon people of cancer and its consequences. The remainder are miscellaneous, though numbers 10 and 11 can be united under the wider title of Questions on Diagnosis. This redistribution is summarised in Table 3, from which it will be seen that one-third of all questions related to the origin and causation of cancer. Another third concerned the fate of people with cancer, and there is a remarkable paucity of queries on treatment, very few on signs and symptoms and an odd reference to cancer research.

Fear, particularly of pain and x-rays, is the greatest dread of patients.

A suggested lecture

How may this dreadful fear be overcome ? By time ? Probably, but this will not help people now. The best way to tackle the immediate problem is by means of authorative talks to lay audiences, for the lecture scheme excels over other methods of approach, such as broadcasting and press articles, because it is more personal and because it gives the listeners a chance to ask questions afterwards. The lecture I shall outline can easily be understood by those not gifted with great intellect, and yet it contains a nucleus of fascinating material for those of higher education. The lecturer may add detail at his own discretion to suit particular audiences.

The aim and purpose of the lecture is to give the public an attitude of mind towards cancer, to neutralise their fears and replace ignorance with reliable information. It is a short, spirited talk designed to stimulate questions and should not contain a list of signs and symptoms which could be committed to memory. This itself might become the genesis of fear lest some vital information be forgotten, or lead to a futile anguish should one such

symptom become apparent, but in fact be the herald of another disease.

The subject is approached through antiquity, and admirably illustrated by the flannelgraph (Wakefield, 1954), the audience is introduced to cancer as a disease which existed before Man himself, and which has plagued all living things, animal and vegetable, since time unknown. The flannelgraph illustrations are of brontosaurus, representing the oldest known sufferer from cancer, an Egyptian mummy, illustrating the oldest cancer known to have afflicted Man at an estimated 5,000 years ago, and a Siamese lady of 3,000 years past, reflecting the first written words on cancer in a description of carcinoma of the breast.

The historical introduction is a perennial success and prepares the way for a description of what cancer really is. The path to this is a description of normal cytology, for with a knowledge of the normal, the abnormal can more readily be understood. Again, flannelgraph illustrations of normal cells make an effective visual aid to the narrative, and I have chosen to use pictures of cells from the respiratory tract, the heart, brain and blood. The need for growth and replacement leads to the final illustration of a cell in the process of mitosis, and a description of abnormal growth then comes as no surprise. All my audiences have found it easy to understand that a small portion of the body can segregate itself from the common function and live at the expense of, rather than towards, the overall economy. On two or three separate occasions when asked about the infectivity of cancer, spontaneous replies came from the audiences, showing that they had understood, and that the questioners had not been listening attentively.

With the knowledge of what cancer is, the object of the lecture is attained, and it is only necessary then to conclude on a hopeful note. This may be accomplished by reference to well known advances in medicine, with special mention of the benefits which have occurred within the lifetime of the audience, and with the further assurance that, in the same way as other maladies which previously were considered incurable, but now have known remedies, cancer likewise will be conquered and become a disease of the past.

My lecture lasts about 20-25 minutes and questions go on for an average of an hour.

It is more than just important, it is essential, to answer questions honestly and simply. If the answer to a question is unknown it

should be admitted, for any dishonesty will be detected in days or weeks to come through an article in a newspaper or magazine written by an eminent authority. But within the limits of truth, it is necessary constantly to stress the bright side of the subject. Thus, when answering questions, it is more suitable in quoting the results of treatment to mention the percentages of cures only. A reference to a 60% cure rate for example, assumes a 40% mortality, but the latter figure need not be rubbed home. They know already that people die from cancer. They visualise wasting away in agonising pain. They need to be given hope.

The Future

Cancer education is no longer a novelty. Not only are lectures used to disseminate knowledge, but articles have appeared in the press (and here I would stress the necessity for accurate rather than sensational reporting), films and television have been used as media, and, more recently, school teachers have been approached to aid in a small way in this programme of enlightenment.

Education schemes exist in other countries, and in the U.S.A. and Canada their projects are in advance of ours. Paterson and Aitken-Swan (1954) have shown in their survey that two-thirds of the people questioned believed that cancer was never curable, and they quote an American survey in which two-thirds of those questioned believed that cancer was, in fact, curable. Yet despite their already advanced educational programmes, still further education is stressed (Phillips, 1955), for the results are so rewarding.

It is conservatively estimated that 10,000 people die needlessly in England every year from curable forms of cancer, from neoplasms which could have been successfully treated had the sufferers only reported for early therapy.

This terrible and unnecessary waste of human life can be prevented only by early diagnosis, itself the fruition of education.

Table I

Number of questioners	448
Number of questions	213
Number of lectures	18
Number of questions per lecture	12 (approx.)

Table II

	Subject of Questions		*Number of times asked*
1.	Is cancer hereditary ?		15
2.	Can cancer be caused by a knock ?		14
3.	Smoking and lung cancer		14
4.	Age of people and growth of cancer		14
5.	Non-organic cause of cancer (including 6 questions specifically on shock)		11
6.	Questions relating to fate of people with cancer		10
7.	X-rays (mostly dangers and pain)		9
8.	Prevalence and distribution of cancer		9
9.	Contagiousness of cancer		8
10.	Reliability of doctors		6
11.	Early recognition of cancer by patients		6
12.	Pain (excluding No. 7 above)		5
13.	Cancer in children		5
14.	Diet in relation to causation of cancer		4
15.	Industrial fumes and smoke in relation to causation of cancer		4
16.	Irradiation and H bombs in relation to causation of cancer		4
17.	Cancer in relation to immunity to other diseases		4
18.	Loss of weight in cancer		3
19.	Has cancer roots ?		2
20.	Questions on individual organs and pathologies :—		
	a. leukæmia	8	
	b. cysts	4	
	c. liver	4	
	d. rodent ulcer	4	
	e. breast	3	
	f. warts	3	
	g. tumours	3	
	h. duodenal ulcer	2	
	i. fibroids	2	
	j. mouth	2	
	Hodgkins, TB, lungs, moles, glands, bones, polyps, œsophagus, skin	1 each	44
21.	Miscellaneous questions		22

Table III

A.	Questions on origin and causation of cancer	74
B.	Questions on how people are affected by cancer and its consequences	76
C.	Questions on diagnosis	12
D.	Miscellaneous	51

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DEVON COUNTY COUNCIL

Health Education Officer

Applications are invited for this new post from candidates with appropriate experience and qualifications. Applicants will be required to co-ordinate and advise field staff on health education activities. Salary Scale A.P.T. III, £960—£1,140. Possession of the Diploma in Content and Methods of Health Education is desirable.

Further particulars and application forms are obtainable from the **County Medical Officer, 45, St. David's Hill, Exeter,** and should be returned immediately.

HEALTH EDUCATION IN A YOUTH CLUB*

By DAPHNE SASIENI, M.B., Ch.B.,
D.(Obst.)R.C.O.G., D.P.H.

My reintroduction to youth clubs was quite accidental. A secretary friend helped with a local youth organisation which was in need of adult workers. She introduced me to the club leader, thus starting a most interesting and stimulating "hobby", which I have now pursued for four years in Manchester, Stepney and South East Essex. The Manchester club was studied in most detail, and figures quoted relate to it.

Refereeing a mixed netball match quickly broke the ice. Soon they realised that I was willing to be questioned about *anything*. Many had ceased to exchange confidences with parents, and had never had an opportunity to talk with trained personnel as equals.

To digress a little on health education in schools: I have found that after giving illustrated talks with modern techniques, watched by teachers, an invitation to the teachers to put on a similar show for other groups in the school, with our ancillary aids, has always been refused on the grounds that "you are the expert, and can deal with the questions" or "we keep telling them these things but they won't listen to us. They see us every day, you're different". No doubt the group relationship between class and teacher is different from that with an occasional visitor, though many do share confidences with some teachers. In schools intimate discussions have been held with small homogeneous groups in the absence of teachers, usually with the more backward or difficult girls.

At the club informal discussion groups soon gathered round me,

*Condensed from a dissertation submitted for the D.P.H. at Manchester University.

usually groups of friends (2-8 girls) who would " pump " me hard for two or three sessions, and then, having exhausted their queries, resume their normal activities, making way for the next group, and perhaps returning in a few months with other questions. Sometimes boys joined the groups, often to discuss similar topics. If the group was agreeable it continued as a mixed unit ; if not, the topic was changed. Occasionally the group was of boys only.

The subjects brought up by the youngsters themselves have remained constant to all groups, though attitudes to family life differed between Manchester and Essex. With small groups I am confident that questions are not asked to show off the knowledge of the questioner or to cause embarrassment. Large mixed groups (20 or more) certainly provoke such questions. Is this a healthy trait ?

Girls and boys are all desperately interested in their personal appearance—care of skin, hair, nails, figures ; and one can easily slip in general posture, teeth, eyes, feet, hygiene, handkerchiefs, combs, diet, smoking and sleep. They are also anxious to know about human relationships, in particular with the opposite sex. Kissing is certainly viewed differently through the eyes of boys and girls in their early teens. At this stage, too, girls are much more interested in details of physical relationships ; the idea of the emotional content of intercourse has not yet entered their heads, and all (who talk about it) are convinced " you do something different if you want a baby ". Few regard pregnancy as the natural result of intercourse. None know or care about venereal disease (which is never brought up spontaneously), though a schoolgirl told me : " you get it from lavatory seats, because it's advertised there " ; and the lads know " one shot cures ". Some girls have heard (of intercourse) that " it hurts, to begin with "—the only teenage deterrent offered against promiscuity, and this is only offered to *half* of them.

Menstruation brings its own group of queries : why, when, how long, how much, tampax (Manchester girls thought you only use this after you've had a baby, but girls in the South are more enlightened), hairwashing, baths, swimming, gym. One can easily turn the conversation to make additional points.

Some lads showed a morbid curiosity in rare diseases, particularly those associated with childbirth. No reason for this interest could be established.

The more formal discussion group (6-100), mainly boys, covered a wide variety of topics, often those relating to discrimination by

age, such as "A" films, "X" films, pubs, marriage, national service, voting. Other topics included racial minorities, colour bar, politics (Suez was current). They were very interested in other countries, and travellers, especially nationals from overseas, were always very welcome.

After a while (Spring, 1957) I devised a questionnaire, so that the group might be available for comparison. It met with great interest, though in my attempts to gain all possible useful information, it became rather long for voluntary co-operation in club time. Questions were grouped, relating to the following :

(*a*) Family and social background
(*b*) Schooling, plans for future career, work
(*c*) Religious knowledge and observance.
(*d*) Out-of-school activities, clubs, cinema, part-time work
(*e*) Parental control of money, clothes, leisure, bedtime
(*f*) Personal hygiene
(*g*) Previous and present family and personal health
(*h*) Club, reasons for joining, comments and criticisms

This was an attempt to make an accurate statistical survey. It revealed that many were afraid to stay too long writing, when they might be missing something more interesting elsewhere, and also that a few derived pleasure from writing obscenities (the culprits later apologised). Such obscenities horrified most of the people (general practitioners, school medical officers, health visitors, school nurses, club leaders, social workers, teachers and parents) to whom I have mentioned them. Most seemed to think the group abnormal, for no such sentiments had ever been expressed to them. For example : Have you any hobbies ?—"Women." How do you spend your pocket money ?—"On pros." Have you ever been on holiday away from home without your parents ?—"Yes, with any tart I fancy." All these answers were given by lads of 14.

Attempts to get parents to come to the club to discuss the project were unsuccessful, though they came willingly to watch matches, and many helped with fund raising. Was this failure due to parents, or to their children not wanting them in the club ?

Future careers

Girls—the majority were indifferent to work, regarding it as a necessary stop-gap prior to marriage.

Boys—most aimed to reach a higher social class than their parents, and mentioned engineering and its various branches,

pharmacy, teaching, law, police, medicine, dentistry, chemist, butcher, confectioner.

With two exceptions (girls) career was not a subject for parental conflict, though the ambitions of two boys showed more fantasy than practicability.

Homework

All who did it admitted some help from siblings, parents and friends. Five did homework after returning from the club (which closed at 10 p.m.), 3 with the wireless on, 2 while watching TV, and one while eating his tea.

Diet

Most girls were interested in cooking a few very attractive dishes. None showed the slightest interest in menu planning, variety, balanced diets, budgeting, or any of the humdrum necessities of "mothering" an ordinary household. This was so even in schools where housecraft was taught in ideal surroundings. It is one of the many inconsistencies of the modern miss—her main aim is to get married, yet to train for this does not appeal to her.

For the majority of girls, breakfast was a cup of tea, there being no time for any more, especially where mother went out to work. Some said this was because they wanted to lose weight—and then bought chocolate and buns at break. The boys usually had hearty appetites. Occasionally a plump lad was worried with his puppy fat.

Sleep

Most went to bed half an hour or an hour later at weekends—Friday, Saturday and Sunday nights. There was a trend towards Sunday morning in bed, but not so marked as in Logan and Goldberg's group (1953).

Parental control of bedtime and leisure

Most of the youngsters told their parents where they were going and with whom. Of 80, 22 girls and 31 boys had to be in by a certain time. The remainder were not given a time limit, but an unwritten code of honour told them what was a reasonable time to return. Either or both parents waited up to see the children in, except for one girl and 10 boys (most had keys).

Most of them were very satisfied with the amount of freedom allowed, though 3 boys and 2 girls thought they had far too much freedom. One girl complained about clothes, and one boy about school.

In marked contrast, many school children strongly resented being asked by their parents where they were going, or who they were going with. These had long since ceased to treat home as much more than a convenience for sleeping and eating. They told deliberate lies to escape rows, often being caught out. The usual explanation offered was that Dad went out every night and never said where, or when he'd be back. However, the vast majority would accept suitable explanations for more pleasant relationships, and realised that it was impossible for their parents to carry on their duties without knowing what the children were up to.

Pocket money

This covered a wide range, from 2s. to 15s. per week, with occasional extras. Many never planned their spending or saved anything. There was a weekly club subscription of 6d. or 1s., and usually 3d. nightly for tuck. Many girls helping with the canteen had favourites to whom they gave things, and then had difficulty in balancing accounts.

Evenings at home

Many girls spent one evening at home of sheer necessity, to wash their hair and perhaps a few smalls. A few would spend an evening at a friend's house. Otherwise they felt they must go out, to club, pictures, dancing, roller or ice skating. Boys were often out, too, though the younger ones were less interested in dancing. Those who got away from home at every opportunity complained " there's nothing to do except watch TV, and Mum and Dad can't agree what to watch—so I go out. Mum nags if I stay in." Here again, discussion helps them to see that a few family evenings could well be spent at home with advantage to all, but results would be better if parents would join these discussions.

Cinema

Five *never* attended a cinema, which seemed a bit hard. Surely every parent could find some films suitable for teenage viewing. (See Table IV).

Wall (1948) thinks they are well aware of the difference between screen and street, but they do not realise that every American home is not exactly like the one depicted on the screen. Many think the life of the stars is just round the corner, without realising that they would have to contribute towards better standards. These sentiments apply to all the groups I have studied, including some

Manchester prostitutes who left home for the "big city" and found things more difficult than they expected, until in desperation they "took the landlady's advice". Does the Board of Film Censors realise how ridiculous it appears to the many 13-or 14-year-olds who regularly see "X" films? Discussion often revealed that they did not understand the message behind such films. Of 50, 11 girls and 6 boys had not seen an "X" film.

Hobbies

Besides club activities, one was a keen bird-watcher and one a stamp collector. Their motives for joining the club were largely family tradition, or to go to camp. A criticism of the club was that there was not enough to do. They wanted more say in running the club; but how difficult it is to get volunteers on to the committee, and what a change for the good when individuals accept committee responsibility.

Reading

33 out of 38 girls and 42 out of 52 boys belonged to a public library and said that they read Dickens, Thackeray and Shakespeare, bloods and novels. Local evening papers were popular, together with women's weeklies, *Eagle* and film magazines.

Radio, television, theatre

A few left the club at 10 p.m. and watched TV until it closed. There was little spontaneous interest in the theatre, but they willingly participated in club visits. Many school children lived too far from "theatre land", but expressed no complaint about this.

Smoking

19 boys and 8 girls admitted that they smoked, and some started at 11. Two smoked occasionally. At 16 some consumed 70-100 cigarettes per week. The parents of half (14) did not know that their children had already started a habit that might considerably shorten their lives. Only 3 had their parents' permission, and 10 smoked knowing that their parents disapproved.

They had heard that "smoking causes cancer", but thought "it can't happen to me", or "they can cure it", or "you might die of something else". They had little desire to reach old age—"you're no use then". In any case, it is grown-up to smoke. A headmaster said to me: "Smoking is like high-heeled shoes, tight skirts, make-up and kissing—we tell them they can do what

they like when they leave here ". Teaching by example was not followed by many.

My impression is that school children are smoking far more now than they were three years ago. Few girls volunteered the information, but admitted it eventually. Girls usually blamed boys for giving them cigarettes. All think it is an expression of maturity.

Holidays away from home

Of 96, 45 boys and 27 girls had had such a holiday. The remainder did not anticipate any parental opposition to the idea.

Medical history, personal and dental hygiene

Nothing significant was revealed regarding medical history. There was almost no contact with general practitioners. Only 5 regularly visited a dentist, but figures were higher among other groups. All bathed several times a week, and 88 washed their hands after using the toilet. 3 never used a toothbrush, 50 brushed their teeth morning (before breakfast) and evening, 48 in the morning before breakfast only (a very common habit). Discussion revealed strong prejudice against conservative dentistry, and almost universal acceptance that false teeth are less bother. With one exception, cosmetics were used with parental approval, but not in school—usually starting at 12-14.

Do you understand about growing up ?

2 girls and 2 boys said they did not. 30 girls and 66 boys understood but wanted more knowledge. All wanted more instruction at school. They thought that their parents had failed them in this respect. Their knowledge was usually obtained from older siblings and friends. Most girls reported that mother told them a bit about " periods ", but usually *after* they had heard from friends. Here teacher, doctor, club leader were all acceptable parental substitutes.

Mental health

Are you happy ?—30 girls and 50 boys said yes. Only 2 boys and one girl admitted any worries (one concerning G.C.E.) Bibby regards complete absence of worry as a sign of ill health.

Only one admitted going out with members of the opposite sex against parental wishes. They start at 12-15. Many do not.

34 out of 48 boys and 30 out of 39 girls had dreams, mainly about the opposite sex. Some were stimulated by ghosts, and " X " films. Many hoped they could believe in dreams.

Religion

All desired more knowledge about religion. It is extremely difficult to get people with knowledge and aptitude to discuss this subject with youngsters.

Public health and the discussion group

Club members often discussed group visits. Once we sent them into town to buy a cup of coffee, and comment on the facilities available. Many shrewd comments were received about the really low standards tolerated, including the fact that one cafe was frequented by "easy women"—from a 14-15 year old mixed foursome.

On another occasion we grew bacteria from hands, handkerchiefs, sneezes, coughs, the floor, a bar of chocolate, etc., and also showed slides of M. tuberculosis and S. typhi, which were received with enthusiasm.

Further health education techniques have been used successfully as far as audience appreciation is concerned. Long term results must wait for assessment.

DISCUSSION

Youth is very interested in some aspects of health, and willing and anxious to discuss these topics. About other matters, sex in particular, they think they may have got hold of the wrong end of the stick, but are willing to get things straightened out, if they can do so without embarrassment, or being made to look silly among their peers. Other topics have to be introduced rather subtly. They do not want to know that smoking really does cause lung cancer, or it that is unhealthy to be grossly overweight, but having stimulated their interest one can make many points quite easily.

One of youth's main problems is "milestones". Physical maturity comes at 12, financial independence (for wife and family) at 25+. Youth clubs can help to ease the burden this gap creates. Schools classify children by chronological age, and intellect, but emotions and physique have to try and "keep up". Clubs can well cut across these barriers, by fostering free association of individuals with similar interests.

There can be no doubt of the desirability of promoting positive health amongst youth. This should be one of the aims of general education.

Youth's subjective interest in health education has been

demonstrated. The objective need is obvious : they smoke, neglect their teeth, wear ill-fitting shoes, conceive children before the legal marriage age, and attend V.D. clinics while still at school (Thompson).

That a club is a convenient medium for health education has also been proved.

Controversy arises over sex education. All youngsters agree that their knowledge is incomplete, not only with regard to anatomy and physiology, but also in respect of any spiritual or emotional relationship. Is this surprising when sex is presented as passion and lust far more often than as only one aspect of a loving and harmonious union ?

Where girls are concerned, it is perhaps even more important to correct wrong notions. Human nature being what it is, woman is the weaker sex, and usually she believes implicitly when the man says " There is no risk, you won't get pregnant ". Too late she learns he was not right. So let us give our mature girls the information they want, *when* they ask for it, in school or in club, or from their doctors.

Will they ask a doctor ? Few would approach their doctor without their parents' knowledge. How can they explain the need for such a discussion when the subject is taboo ? How many general practitioners would welcome such enquiries ? My general practitioner principal wanted to know the current standards of knowledge and practice among teenage girls. When he was a student, 30 years ago, there were few women in medical schools and these topics were not discussed. Now it is not done to ask this sort of question at public medical meetings, because, like the teenager, one is reticent about displaying ignorance.

Students (many of them teenagers themselves) are often in the midst of personal emotional problems, so that whilst training, teachers, nurses and doctors are not necessarily able to comprehend fully the problems of others just a little younger. The need for post-graduate instruction for mature personalities has been expressed to me by all these groups.

The Board of Education (1943) stated that sex education should be given before youth enters a club. More recently (1956) the Ministry discussed this question in greater detail, advising teachers and emphasising the need to answer individual questions as they arise.

Most school medical officers have neither time nor facilities for enquiring into the mental processes of adolescence. Nor can

children unburden themselves in a partitioned room, with a teacher behind a screen who has already expressed disapproval that the problem exists.

We have too many teachers who dread giving their annual sex talks. One single woman of 30 begged me to tell her what to say, without realising that there is more to teaching than the words used. Another view, of a trained married male youth leader, was that " experimental intercourse is all right for them (14-16)—they're too young to get pregnant. "

The vulnerability of the school leaver at his first job is well known. About half come under the care of the appointed factory doctor, who is mainly concerned with physical welfare. No-one accepts responsibility for the others. If during their school days they have established rapport with some friendly adult in a club, it is likely that they will continue this relationship to help with their new problems.

We know that only 60 per cent of the medical causes of rejection for National Service are noted on school medical records (Lee). Do the others arise during the 15-18 period ? Surely here is a need for further observation. Of course, observation of club members would still only cover a small proportion of this very vulnerable group.

At present there is much " official " interest in older teenagers, as shown by the Albemarle and Crowther reports. Now, surely, is the time to encourage our colleagues to devote more of their time and energy to studying and helping this most interesting group, in whose hands the future lies.

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APPENDIX

The following tables relate to members of a youth club in Manchester.

Age in years	Number of members Boys	Girls
12	—	1
13	2	1
14	24	23
15	19	8
16	14	4
17	19	4
18	7	1
19	3	1
20	—	—
21	2	—
Total	90	43

Average age : Boys—15.8 years. Girls—14.7 years.

Table I. Ages of 90 boys and 43 girls.

Of 110 replies there were :

14 incomplete families (death—11
separation—2
unmarried mother—1)

110 homes with baths
42 homes with refrigerators
75 homes with television
10 homes with cars (2 for business)
21 only children
26 children sharing bedrooms
10 children sharing beds
30 girls and 26 boys helped regularly in house and/or garden.

Social Class (R.G.)	I	II	III	IV	V
Number	—	19	25	9	3
Percentage		33	45	10	9

Table II. Social class by father's occupation.

This classification gave high numbers in the skilled and intermediate classes II and III because many fathers were owners or managers of small businesses. The only mothers working full-time were widows or separated from their husbands (total 8). 9 mothers worked part-time.

Type of school	Number	
	Boys	Girls
Grammar	24	13
Technical	13	6
Secondary modern	30	20
Secondary modern—now working fulltime	5	1

Table III. School attended by 72 boys and 40 girls.

Numbers attending grammar and technical schools are probably inflated, because of their better staying power and because more of these children attended the club during the Easter holidays. Of 85 children, 5 girls and 9 boys were engaged in part-time work. All except 2 were saving for a particular object.

Weekly cinema attendances.	Girls	Boys
4	3	2
3	1	3
2	6	8
1	21	33
Occasionally	4	2
Never	3	2

Table IV. Weekly cinema attendances of 38 girls and 50 boys.

CCHE ANNUAL CONFERENCE

At the CCHE Annual Conference on **The Road to Maturity**, to be held at the National Film Theatre, South Bank, S.E.1, on 26th January, 1961, the following speakers will take part :

Mrs. H. R. Chetwynd, Headmistress, Woodberry Down School.
Dr. Malcolm S. Harvey, Medical Officer of Health, Canterbury.
Mr. Marcus Morris, Editorial Director, National Magazine Co.
Dr. D. Stafford-Clark, Director of the York Clinic, Guy's Hospital.

The fee for the Conference is £1.

OBITUARY

ERNEST KENNETH MACDONALD,
O.B.E., M.D., D.P.H.

Dr. E. K. Macdonald, who was Chairman of the Central Council for Health Education from 1948 to 1951, died on 13th September, 1960.

A.D. writes :—

Health Education owes much to Leicestershire. The late Tom Crew, Clerk of the Leicestershire Insurance Committee, was an early advocate of health teaching and, many years ago, was a part time secretary of the Central Council.

More recently, Dr. E. K. Macdonald, Medical Officer of Health of the City of Leicester, took an active and enthusiastic interest in its work. He was its chairman during the years 1948-51 when the office was specially onerous as it was at that time that the constitution of the Council was radically changed. He ensured by his wise guidance that the Council's work would continue to develop.

All will regret deeply his death at the age of 64.

After service in the Royal Navy in the first World War he held a variety of posts in the public health service before he was appointed MOH of Leicester in 1935, where his influence, not only there but nationally, was outstanding.

He invented "Dr. Fosse", a benevolent looking fellow with whose opinions it was impossible to disagree, who gave advice in leaflets and on posters. Leicester was one of the first cities to appoint a Health Education Officer.

He gallantly covered up the ill health which dogged his footsteps for many years. He always seemed full of energy and few suspected his disability. As chairman, or committee member, he was ideal : never too talkative, but always ready at the right moment to offer a solution to any problem. He was modest in expressing his views, though his long experience was at the disposal of all who sought to benefit by it.

For many years to come no account of the history of health education in Britain will be complete without a reference to Macdonald's pioneer efforts.

We express to Mrs. Macdonald and their three children our deepest sympathy.

THE NURSE AND COMMUNITY ORGANISATION:

A Training Project

By HELEN NAVID
Community Organiser, Ministry of Health—Hadassah Medical Organisation Health Education Unit, Jerusalem, Israel.

IN the undergraduate teaching of both medical and nursing students, the emphasis has tended to be placed upon disease conditions rather than on the community or social aspects of health and disease. In recent years, however, nursing colleges have accorded growing recognition to the need for providing undergraduate students with a broader preparatory basis covering more than just the technical skills of nursing care[1]. This need for broader training has also been felt by the Nurses' Training School of the Hadassah Medical Organisation in Jerusalem, where for the past few years the curriculum has included short courses in psychology, sociology and group dynamics in addition to the more traditional nursing subjects. In addition this school has introduced, in the third year of study, a block period of approximately one month devoted to the community aspects of health and disease.

One of the objects of these additions to the curriculum has been to demonstrate the part which the individual, his family and his community can play in the transmission or control of various illnesses or in the prevention of disease states. A further aim was that of bringing to the attention of the student nurses the multiplicity of resources which can be mobilised in any average community for dealing with different health problems. The final aim of the programme was that of indicating to the

[1]Abdellah, Faye G. (1959). How we look at ourselves. *Nursing Outlook*. 7 (5).
Vanderbilt University School of Nursing. Handbook 1959-60, pp. 273-75.

students the role that the public health nurse should, and frequently does, play in educating and stimulating community agencies to take appropriate action for the treatment or prevention of a wide range of public health problems.

The particular subject chosen this year as the vehicle for illustrating these aims was " Home and Neighbourhood Accidents." In order to provide the necessary introduction to the programme and in order to place it in its proper perspective as a major public health problem, a selected bibliography was prepared which constituted compulsory reading for the students.

The second step comprised the collection, by the students, of information relating to a number of accidents which had occurred during the year 1959 among a group of families in three neighbourhoods in Jerusalem. The families were chosen by the medical personnel of two Health Centres of the Hadassah Medical Organisation functioning in the above neighbourhoods, and they covered the following types of accidents : burns, falls, poisoning, swallowing or insertion of a foreign body, lacerations and open wounds due to falls and cuts. In the case of one of the health centres concerned, all the families in which poisoning, foreign bodies or burns had occurred during 1959 were included. On the other hand, cases of lacerations and open wounds were selected by the doctors and nurses in a somewhat arbitrary manner from amongst families known to be willing to give information ; from those with a history of multiple accidents or illnesses ; and from families in which the mother was not working outside the home and would consequently be available to the students. The cases of falls and cuts included in the study therefore represented only part of the total number of such cases known to the centre in 1959. In regard to the second health centre mentioned above, the families allocated to the students represented those whom the nurses could easily recall as having been involved in one of the above categories of accidents during the year 1959. It was not possible to ascertain what percentage of the total number of accident cases occurring in this particular neighbourhood was represented by the number chosen for inclusion in the students' programme. The total number of accidents finally included in the study was 71.

The information relating to the accident cases covered by this project was based on a series of questions drawn up partly by the students themselves and partly by the instructors. In compiling the schedule, the students were encouraged, by means of group discussion, and on the basis of the preliminary reading they had

done, to consider what information they deemed relevant to a study of the causes of accidents and the possibilities of their prevention. A preliminary schedule was drawn up in advance by the instructors and this served as the basis of the group discussion. In its final form, the schedule covered the following points :

(*a*) Family composition ; the ethnic group of head of family ; the occupation of head of family ; the occupation of the mother.

(*b*) Age and sex of child involved in the accident ; school or nursery school attendance ; play activities ; physical disabilities or illnesses.

(*c*) Home conditions—number of rooms in the dwelling ; placement of furniture within the home ; storage of medicines, poisons, insecticides ; the state of the yard.

(*d*) Details of the accident : hour, day and month of occurrence ; the place in which it occurred ; the care of the child at the time of the accident.

(*e*) Preventive measures taken by the family to prevent a similar or other accident in the future.

This schedule, copies of which can be obtained on request, was used as the basis of a series of home visits conducted by the students. Following these visits, the students were sent on a general tour of observation of the neighbourhoods covered by the programme. During these visits of observation, the students were required to pay particular attention to certain points. These were determined mainly by the students themselves in the course of a group discussion and were based on the impressions they had gained from their reading and from their home visits. In this case, too, a list of relevant points had previously been compiled by the instructors and was used to supplement the students' list. The following points were included in this latter list :

(*a*) General state of repair of the roads ; the presence of potholes ; untarred surfaces ; the condition of public stairways.

(*b*) Lighting facilities in the neighbourhood.

(*c*) Playgrounds for children ; fencing-off of school grounds.

The results of the home and neighbourhood survey were, in the main, in harmony with the results reported by various international studies on the subject of accident prevention. Among these findings were the following :—

(*a*) A larger proportion (67.6%) of accidents occurred in children from 1-9 years of age. The sex distribution of

accidents comprised twice as many boys as girls in this age-group.

(*b*) Falls and burns were the two most frequent causes of accidents, comprising 60.6% of the total number.

(*c*) In the majority of cases the accidents could have been prevented either by steps which the family itself could have taken or by action on the part of one of the public agencies. For example, more adequate supervision of young children ; the placing of sharp objects out of reach of young children ; the more careful storage of household cleaning materials ; the removal of rubble, stones and rocks from public streets ; and the provision of handrails on public staircases.

At this stage of the programme, a further discussion was held with the students in which their attention was drawn to the possibilities of individual and group education in the community, as well as to the possibilities of using various community agencies in a programme of accident prevention. The functions of these agencies and their responsibility for some of the factors concerned with accident prevention were discussed. Particular emphasis was laid on the responsibility of the Municipality in respect of maintenance of roads and the provision of adequate street lighting ; and on the responsibility of the Ministry of Health in regard to the control of insecticides and other poisonous materials ; and on the part played by the public health doctor and nurse in individual family education and guidance.

As a continuation of this discussion, the students drew up a series of suggestions for educating typical community groups such as groups of mothers ; members of youth centres ; teachers and children in neighbourhood schools in regard to accident hazards. The instructors and several of the students then held discussions with a group of youth at a youth centre in one of the neighbourhoods covered by the project, as well as with a group of teachers and children in one of the schools in the same neighbourhood. These two experiences gave the students an opportunity of testing the suggestions they had drawn up as well as of conducting a discussion designed to provoke interest in a health topic.

In regard to the community agencies involved, the students were given an opportunity of meeting the following people in order to discuss the part their organisations could play in a programme of accident prevention : the Legal Adviser to the Ministry of Health, a representative of the Bureau of Standards, the head of the Mother and Child Welfare section of the Ministry of Health, the secretary

of the Consumers' Association, the City Engineer's office and a public health nurse responsible for a neighbourhood health centre. Here, too, the aim was to provide the students with the opportunity, first, of familiarising themselves with some of the community resources which can be mobilised for the prevention or treatment of various illnesses or health problems—in this instance, accidents ; and, secondly, of gaining first-hand experience of the role which a public health nurse can play in stimulating awareness on the part of various agencies of the needs and requirements of a particular health problem.

In the course of conducting this programme, several defects and limitations became apparent. It was found that the time allocated to it was too short to allow adequate coverage of the various aspects involved. Furthermore, since the method used for the collection of information was that of recall, many of the families concerned were unable to furnish detailed information about an accident which had occurred some months previously. This was, of course, particularly marked in regard to accidents which had been comparatively minor in nature. Consequently, much essential information was not forthcoming. Finally, since there was no on-going community programme relating to accident prevention which could be used for demonstration purposes, a good deal of the teaching in the programme remained of a theoretical nature only. For students unfamiliar with working with various groups or with exploiting the resources of community agencies, it was difficult to visualise the bridge between theory and practice. There is, therefore, a very real need (if similar programmes are to be conducted in the future) for the establishment of an effective field teaching base where sound social epidemiological study can form the basis for actual on-going programmes. Such a fieldwork base could then be used for demonstrating a variety of health problems to both medical and nursing students.

On the positive side, on the other hand, it must be mentioned that while the traditional hospital nursing course involves considerable participation on the part of the student nurses, this participation is largely physical in nature. It provides little scope for the nurse to display initiative in regard to the planning of her work programme, her functions in the ward or the content or method of transmission of the theoretical material supplied to her. In contrast to this, the programme described in this article differed markedly from the usual type of learning situation experienced by the nurses during their 3-year study period and provided them

with considerable opportunity and scope for independent thought and action.

Another positive factor which should be recorded is that the subject of "Home and Community Accidents" lends itself well to teaching purposes and provides a good opportunity for highlighting the medical and health factors connected with it. Furthermore, it enables the bridge between out-patient care and hospital care to be fairly easily illustrated. The hospital setting, which is a familiar one to the student nurses, illustrates the dramatic results which are frequently associated with the accident case that reaches hospital for treatment. In contrast to this, the home visiting and the discussions held with community groups provided the opportunity of becoming familiar with the more minor, but at the same time, the more commonly encountered run of family accidents and injuries which are likely to occur in almost every home at one time or another.

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I should like to express my thanks to those of my colleagues in the Hadassah Medical Organisation who participated in this programme.

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THE METABOLISM OF FLUORIDE AND ITS ACTION IN REDUCING DENTAL DECAY

By NEIL JENKINS, M.Sc., Ph.D.,
University of Durham.

Fluoride intake in Great Britain

FEW analyses for fluoride have been published of British foods but the fairly extensive American figures are presumably applicable. Most foods are reported to contain less than one part per million (ppm) and many of them much less. Fish is one of the richer sources but British analytical figures have, inexplicably, been much lower than American. The total intake from food in U.S.A. varies between 0.25 and 1.0 mg a day, with most figures in the lower end of this range. This estimate can be accepted as a guide to British intake from food, but the fluoride from tea must be added. The fluoride concentration of an average fresh brew of tea is about 1 ppm, but if the usual practice is carried out of adding water to the first infusion then the second and later cups will contain less. A moderate tea drinker probably receives about 0.5 mg of fluoride a day from tea.

Absorption of fluoride

The absorption of fluoride in a soluble form is rapid but may be reduced by two reactions which can occur in the digestive tract. Firstly, in the presence of excess calcium, calcium fluoride may be precipitated. Secondly, if calcium phosphate is present it picks up the fluoride and binds it tightly by several methods, one of which is the partial conversion of the usual form of this substance, hydroxy-apatite, into fluor-apatite—a process which also occurs in bone. The importance of these factors has been demonstrated in many animal feeding experiments. It is probable that bones of tinned fish and various bone meal preparations, both of which are high in fluoride, may not be very efficient means of raising fluoride intake.

This effect of other salts on fluoride absorption raises the question

of whether fluoride in a hard water is as readily absorbed as from a soft water. This has never been fully tested with waters differing greatly in hardness, but moderate differences do not appear to have altered the effectiveness of fluoridation on dental caries in America. It has been calculated that only magnesium and calcium are ever present in hard water in sufficient concentration to interfere with fluoride absorption. In very hard water it was thought that 2.8% of fluoride might be bound by calcium and up to 28% by magnesium. Whether this binding is important in the digestive tract, where many factors arise which might increase or decrease the binding, is not definitely known.

The storage of fluoride in rats given either natural fluoride-containing water, or distilled water to which the same level of fluoride had been added, showed a small trend towards less retention from the natural source, presumably because other salts in the natural water reduced absorption.

Animal experiments have shown that absorption of fluoride is rapid and, in the absence of excess calcium, almost complete.

Blood fluoride

The estimation of the very low concentrations of fluoride in blood or plasma is not easy and only fairly large variations can be measured. Analysis of plasma from residents of towns with water supplies varying from 0.15 to 5.4 ppm of F showed that with the lowest intake the plasma concentration was 0.14 ppm and there was no detectable difference till the intake was 2.6 ppm (plasma 0.17) and only with the highest intake was the plasma concentration increased much (to 0.26 ppm). These figures might suggest that the plasma levels were unaffected by less than 2.6 ppm in the water, but this cannot be accepted because even 1 ppm is known to increase the fluoride level of bone. The plasma fluoride must therefore be raised a little but, because uptake in the bone and excretion via the urine are so rapid, plasma levels actually rise for only a short time after ingestion. Unless samples are taken at frequent intervals this small rise is not detected.

Storage and excretion of fluoride

Early work suggested that if the daily intake was less than 4-5 mg then virtually the whole of it was excreted in the urine. This was, however, disproved by the finding that bone fluoride rises steadily with age even in areas with virtually no fluoride in the water, where the intake (from food) is probably less than 1 mg a day. More

recent balance studies have confirmed that even with intakes lower than 1.0 mg a day the urine contains less than the food.

The affinity of the skeleton for fluoride is so great that there is an uptake even from the low concentrations in blood plasma. What is not yet entirely established is whether the uptake continues indefinitely, or whether for each level of fluoride there is an eventual " saturation " of the skeleton after which all the fluoride is excreted. There is no doubt that if the intake is suddenly increased (e.g. after the introduction of fluoridation) the retention increases at first but gradually falls during the following few months, i.e. the amount of fluoride in the urine gradually rises. Presumably the skeleton reaches a new equilibrium with the higher level after which further storage is much slower. Nevertheless, at all levels of intake the storage of fluoride continues at least till middle age, reaching about 200 ppm in a " low F " town. The bone fluoride level in Great Britain is higher than in comparable specimens from America, probably as a result of the much greater quantities of tea drunk in this country. Since bone is the only tissue in which there is extensive accumulation of fluoride it is the place where the first toxic effects might be expected. There is, however, no evidence that the concentrations reached after the prolonged intake of up to 3mg a day are in any way harmful to the bone cells.

Storage of fluoride in the teeth has also been found with advancing age. The dentine concentration rises considerably and there is some increase in the enamel.

Accumulation of fluoride elsewhere in the body is negligible except perhaps in the placenta, which seems to act as a filter and prevents fluoride from entering the foetus save in minute traces. The low level of fluoride in the blood and tissues generally, which arises from the rapid binding by bone and excretion in the urine, strengthens the view that the concentrations concerned in fluoridation are entirely harmless.

Fluoride has been detected in sweat, which complicates balance studies because sweat cannot be collected in long-term experiments. If it is not allowed for, estimates of fluoride intake and excretion may suggest a higher retention of fluoride than has actually occurred.

Mode of action in reducing caries

There is still no certainty about the mode of action of fluoride in reducing caries, but two main views have been held. Recent evidence has tentatively suggested a third possibility. The two views which have received most attention are that fluoride either

reduces the solubility of enamel or inhibits acid production by the bacteria of the dental plaque. These and other theories are not, of course, mutually exclusive.

The first theory is based on the well-established fact that fluor-apatite is less soluble than hydroxy-apatite and that treating enamel with sodium fluoride solution can be readily shown to reduce its solubility. At first sight, it would seem to be an easy matter to test this theory simply by comparing the solubility in acids of groups of teeth from high and low fluoride areas. In practice there are many difficulties. It is known that the fluoride is more highly concentrated on the outer surface than within the enamel so that it is the solubility of this outer layer (i.e. where caries begins) which must be studied. Unfortunately, this layer varies greatly and erratically, from one tooth to another in composition and solubility, so that for a valid result large groups are necessary. These are not easy to obtain since comparatively few teeth are extracted in high fluoride areas (because fewer decay) and many extracted in low fluoride areas are so far gone that there is insufficient enamel left to test. Also, it is known that if teeth are allowed to dry up, their solubility falls. When teeth are being collected, as a favour, by busy dental surgeons it is difficult to be absolutely certain that all the teeth have received identical treatment between extraction and testing. Tests by the present author on the intact outer surface of several hundred teeth showed a trend towards a reduced solubility for the high F teeth, but the differences were not statistically significant, except for one group of deciduous teeth from West Hartlepool (2 ppm F). In permanent teeth the difference was minute. If ten times as many teeth had been available for testing this small difference might have been significant.

Another method of testing this point is to grind off the extreme outer surface of the enamel from F and non F teeth and compare the solubilities of the powder. This method gave very erratic results in our hands, but workers in America found that in general powdered outer enamel from F teeth were between 3 and 5% less soluble than the non F teeth. They also found some unexplained anomalies, however. For example, enamel from older people contained more fluoride but was not less soluble than enamel from youngsters. Taking the evidence as a whole it does indicate a small difference in solubility. There is no means of estimating how large the difference must be to influence caries, but it may be quite small. It always has to be remembered that any difference between the teeth from high and low F towns is reduced because

even teeth from a low F town do contain some fluoride. We are, in other words, comparing the effect of some fluoride with that of more fluoride–not the effect of some fluoride with that of none at all.

One other effect of fluoride on solubility should be mentioned which provides one possible explanation of the finding that teeth already erupted derive some benefit from fluoridation. Studies with radioactive fluoride have shown that any defect on the enamel surface, including a cavity at an early stage, takes up more fluoride than the intact surface.

This led to studies on the fluoride content of early cavities in teeth from high and low F towns to see whether this uptake occurred under natural conditions in the mouth, from food and drink, in the same way as it did experimentally from solutions applied to the teeth. It was found that the fluoride content of the whole of the enamel in an early cavity was about as high as the surface areas of intact enamel, and this was accompanied by a much reduced solubility of the carious area compared with the intact—the difference being especially great in teeth from the F area. One could speculate that when enamel is damaged, fluoride in the food and drink can diffuse in between the crystals to the inner enamel and become bound by exposed surfaces not normally available to fluoride. As the fluoride builds up, so the solubility is reduced. It may seem surprising that as a cavity develops (i.e. as the tooth substance *dissolves*) the enamel actually becomes progressively *less* soluble but that is undoubtedly what is observed. It is not proved that the accompanying rise in concentration of fluoride explains this fact, but it is a reasonable possibility although the entry of other substances from saliva certainly occurs and may contribute to the effect.

The antibacterial theory

It is, of course, well-known that fluoride can inhibit certain enzymes but before deciding whether this effect plays any part in the anti-caries action several pieces of information are required. We must know, first, the minimum concentration of fluoride needed to inhibit bacteria of the dental plaque, i.e. the muco-bacterial layer on the teeth, and secondly, the actual concentration present in the plaque. Information on both points, especially the second, is still uncertain. There is good evidence from test-tube experiments that low concentrations of 1 or 2 ppm can have a detectable, though very small, effect in reducing acid production by salivary bacteria. However, the action is very sensitive to the pH and

under slightly acid conditions (pH 5.0) as little as 6 to 10 ppm can stop acid production completely, at least in the test-tube.

Does the concentration in the plaque reach this level ? Estimation of plaque fluoride by conventional methods is almost impossible and although the problem is being attacked at present by some very ingenious radioactive methods no final conclusion is yet possible. It is legitimate to speculate on the possible sources of plaque fluoride. These would seem to be saliva, food and drink, and the enamel surface. The concentration in saliva is only about 0.1 ppm so that unless the plaque can concentrate fluoride, this source is inadequate. Similarly, even in high F areas, drinking water and tea would provide only up to about 2 ppm. The high fluoride concentration on the enamel surface is tightly bound and would certainly not diffuse into the plaque—on the contrary, concentrations even as low as those in saliva tend to become *attached* to enamel. When the plaque becomes acid after carbohydrate foods, however, a very thin layer of the enamel might perhaps dissolve and release into the inner plaque various constituents of enamel, including fluoride. Thus might arise locally a concentration of fluoride in the presence of those acid conditions which are known to favour its action. There is one difficulty in that this process would be expected to lead to a gradual fall in fluoride concentration as some of the fluoride entering the plaque would be lost by diffusion, tooth brushing, etc. The fact is that the fluoride steadily rises with age. This difficulty could be met, however, by the probability that some of the fluoride leaving the enamel could recombine with it later ; and additional fluoride could be taken up from the low concentration in saliva and drinks. Although nothing is established, it is thus possible to reconcile the periodical loss of some enamel fluoride after meals to build up inhibitory levels in the plaque, with a gradual rise with increasing age.

The new theory which is now receiving attention is that fluoride increases the deposition of phosphate from saliva on to the enamel surface. Several lines of evidence suggest that fluoride has this action. It has also been shown in animal experiments that adding phosphate to the diet reduces caries (by unknown mechanisms) and it is speculated that fluoride may act by enhancing the phosphate effect. Work on the importance of phosphate in human caries is now in progress.

BOOKS

HEALTH AND THE FIREMAN, by M. D. Warren. (Hodgetts Ltd., 72/78 Fleet Street, E.C.4. 1960. Pp. 38. Price 1s. 6d.)

"No unit of the Army would enter battle without a medical officer". So says Dr. Warren in the Conclusion of his admirable little book, underlining his plea for the appointment of full-time doctors to Fire Brigades or Fire Service Areas. It will be a surprise to many people to learn that this is not already the practice in Britain, as it is, for example, in the United States and in France.

Far too little has been done to investigate the occupational hazards of firemen, and we are deeply indebted to Dr. Warren, who is lecturer in Preventive and Social Medicine at the London School of Hygiene and Tropical Medicine, for this comprehensive and easily read booklet.

In less than 40 pages he surveys the whole field and, in addition to the risks to health involved in fire-fighting, gives much vital information regarding the use of oxygen in resuscitation, the treatment of burns and the effect of heat on the body.

This booklet should be required reading for all members of Local Authorities who serve on Fire Brigade and Health Committees.

WINIFRED M. GOLDING.

A HISTORY OF THE NURSING PROFESSION, by Brian Abel-Smith. (Heinemann. 1960. Pp. 290. Price 30s.

This book comes at a time when once again changes are taking place. The Royal College of Nursing recently opened its portals to male nurses and to the nurses whose names appear on the Mental and Mental Deficiency parts of the State Registers. Parliament has recently given approval to minimum educational standards for student nurses, and certain hospitals are to become training schools for the State Enrolled Assistant Nurse. In addition to this, there are several new consolidated schemes of training, two of which are being run as University courses. The author of the present work may consider a second volume necessary in a few years' time, to cope with these new phases in nursing history.

Great credit is due to the author for his thorough and painstaking research, in producing such an authentic and readable account. There are several amusing extracts from old publications, the illustrations are worthy of study, the footnotes are excellent and the chapters follow a chronological order. The sociological pattern of the 19th century is reflected in mention of the emancipation of women, the changing attitude to medical care, and the emergence of the first scheme of training for the nurse. The reader is not, however, given a clear picture of the emergence of the District Nursing and Health Visiting services, although passing reference is made to each of these. The appendices give a mass of information, including statistics of nurses in employment and of salary scales.

This is a book which every student nurse would benefit from reading, to give her a clear picture of the struggles and emergence of her profession, and of her present day heritage. It should find a place in every hospital library and will prove an excellent book of reference to sociological students, as well as for future nursing histories.

EDITH M. LEES.

HEALTH WORKERS' ATTITUDES TOWARD COMMUNITY DEVELOPMENT PROGRAMS, by William Griffiths. (Health Education Monographs No. 4. Society of Public Health Educators, U.S.A. 1959. Pp. 38. Price $1.00).

The contents of this monograph are based on experience gained from the "Point Four Programmes" which have been carried out in various parts of the world. These projects are set up by the International Co-operation Administration of the U.S.A., which assists under-developed countries financially and by specialist help. This aid is aimed at improving the life of the rural population. Their main concerns are agriculture, health, industry and education.

No mention is made of transport and communications, which we consider

very important factors in the development of rural areas.

The monograph shows that where already-existing health agencies have participated, been informed or consulted regularly, regarding the community development programmes, the more favourable the attitude is towards the success of the project. Where less co-operation occurred it was evident that the attitude was coloured by lack of knowledge of the aims and facts concerning the project.

Community development workers are drawn from villages concerned in the programmes and are complementary to the health workers employed by state and provincial governments.

In India and the Philippines programmes have been extended throughout these countries and are considered of great importance by the heads of government. This promotes greater interest and co-operation with other services at all levels of the hierarchy.

Stress is laid on the need to assess and evaluate the projects regularly and re-orientate where necessary.

This is an interesting publication for any worker who contemplates international work in an under-developed country.

A. I. ROWBOTTOM.

THE MAUDSLEY PERSONALITY INVENTORY by H. J. Eysenck. (University of London Press. 1959. Price: Manual and Diagnostic Keys, 4s. 6d. Questionnaire 5d. each, 4s. 3d. per doz.)

This is primarily a research instrument to measure neuroticism and extraversion and it is accompanied by a manual of instruction. Although these characteristics are independent, and it might therefore be expected that they had no correlation, a very slight negative correlation has been found in most samples of subjects tested.

The test consists of 48 questions on behaviour, feeling and action, requiring replies classified as Positive, Doubtful, or Negative. If the number of Doubtful replies exceeds ten, the subject should be re-tested. The integrity of the replies is protected by the examinee's ignorance of the method of assessment.

The scales can be used in experimental psychology, clinical work, general selection and market research.

M. MCLEOD JACKSON.

MARRIAGE AND MIDDLE AGE. by John Crowlesmith. (The Alliance. 1960. Pp. 22. Price 1s.)

This booklet describes some of the problems which may occur during the middle years of marriage, and suggests ways and means of overcoming or avoiding such difficulties. The author writes of the unconscious need for reassurance, and describes the important role each partner should play in bolstering the morale of the other. Some reasons why hostility replaces love are given, and a solution is preferred. Other topics include sexual adjustment, personal appearance, common interests, extramarital relationships, parent-child relationships, and religion.

It is an excellent book not only for middle aged couples who want to enjoy their remaining years, but also for younger couples who wish to lead their marriage into a relationship of deepening peace and joy.

P. P. RICHARDSON.

A HANDBOOK OF SEX KNOWLEDGE, by Jonathan Rodney. (Elek Books Ltd. 1960. Pp. 160. Price 13s. 6d.)

This book is addressed to married couples and those about to marry. The author sets out to give, as the dust jacket states, " the complete facts of sex ". There are chapters on the sex instinct, anatomy, sexual development in childhood and adolescence, the sex act, contraception, sexual problems, abnormalities and superstitions and sex psychology.

In a book of this length it is clearly impossible to give detailed information, and in fact many of the topics are treated superficially and somewhat inaccurately. The reader seeking knowledge may well be confused by the mixture of opinion with fact. Though the general tone of the book is one of reassurance, some points which are stressed are likely to produce anxiety in the reader, particularly the author's insistence on the need for simultaneous orgasm, and his statement that any normal man can delay ejaculation by the use of " will power ".

ELIZABETH WEST.

DEMOGRAPHIC YEAR BOOK 1959. (Statistical Office of the United Nations. 1960. Pp. 719. Price £3 11s. clothbound; £2 17s. paperbound).

This issue of the *Demographic Yearbook*, an annual publication giving statistical information on population trends and shifts in all parts of the world, contains statistics on area, population, births, deaths, marriages, divorces and migration. Natality statistics are presented in particular detail for the first time since 1954, and birth and foetal-death statistics are given for the period 1949-1958. Together with data from the two previous natality volumes (issues of 1949-50 and 1954) it provides 20-year historical series.

For the first time, an attempt has been made to differentiate statistics in the *Yearbook* according to their degree of reliability; data considered to be "less reliable" are set in italics. Technical notes describe the tables and indicate the deficiencies and limitations of the data.

FILMSTRIP

MENTAL HEALTH SERVICES, produced by Camera Talks in co-operation with Salford Health Department. Colour. 36 frames. Price £2 12s. 6d.

This is a welcome addition to visual aids in World Mental Health Year. It starts with some causes of mental ill-health, such as environmental conditions, and work and family stresses. Senile dementia is illustrated by a wonderful picture of a senile old lady in characteristic surroundings. Subnormality is well covered: assessment, junior and adult training centres, industrial training centres, and special care units. The work of the mental welfare office of the local authority, and his co-operation with other services, is well illustrated. The final five frames deal with promotion and prevention. Psychiatric hospital services are not discussed.

The teaching notes are full and more than adequate. One minor criticism of the filmstrip is that it jumps too often from one topic to another.

This filmstrip would be useful to illustrate a talk to older school children or to adult groups, and parts of it could be used to promote discussion.

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